Westinghouse Electric & Manufacturing Co.

PITTSBURG, PA.

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Alternating Current Constant Potential Arc Lamps.

INDOOR TYPES.

FIGURE 1.

10 HOUR LAMP.
PLAIN BRASS FINISH.

FIGURE 2.

10 HOUR LAMP.
ORNAMENTAL BRASS FINISH

Indoor A. C. Constant Potential Arc Lamp.

The lamp herein described incorporates in its design a marked advance over all previous practice. It is made without any upper carbon rod whatever. That part is replaced by a chain and spring feeding mechanism. The lamp therefore has neither clutch to stick nor rack to wear out. We have succeeded in producing a feed which is absolutely uniform, and the

FIGURE 3.

10 HOUR LAMP WITH ECONOMY COIL.

FIGURE 4.

10 HOUR LAMP WITH GLOBE DOWN.

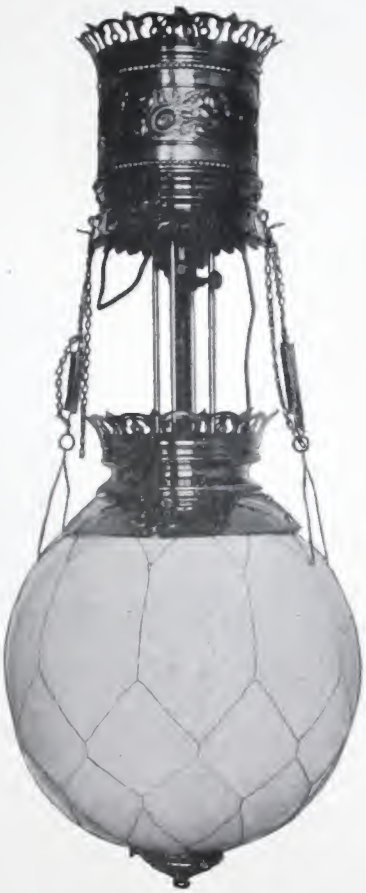
light is consequently even and steady. The lamp is so nearly noiseless in operation on a 60 cycle current as to be satisfactory for the very exacting service of New York and other large cities. Being without a carbon rod the lamp needs no chimney and consequently can be made very short. It is in fact a shorter lamp than any other ever offered for an equal life with one

trimming. It may be used where ceilings are too low to permit the use of any other type. The carbons are fed from both directions. This keeps the arc always at the same point, and permits the use of a reflector so placed as to entirely eliminate any shadow from the lower carbon holder and dust cap. The lower lamp frame is single sided and very light, causing no noticeable side shadow. We call attention to the fact that the arc itself and the lamp

FIGURE 5.

14 HOUR LAMP.
BRIGHT BRASS FINISH.

FIGURE 6.



14 HOUR LAMP.
BRIGHT BRASS FINISH.

mechanism are in different chambers, separated from each other by a considerable air space. This protects the working parts from heat and from carbon dust, thereby both increasing the durability and decreasing the necessary attention. This lamp, therefore, is free from the causes that occasion so much trouble in lamps whose mechanism and arc are enclosed

by one cover. This lamp may be used on any commercial frequency without special adjustment. No steadying resistance is required, consequently all the energy consumed is useful energy, and the lamp takes considerably less power than other A. C. lamps for an equal degree of illumination. There is no chattering on starting; the lamp picks up at once and burns steadily without flaming. The chain globe support makes trimming easy, with no danger of dropping the globe. Figure 4 shows the globe down for trimming. A dust cap in the bottom of the globe permits the ready removal of carbon dust.

The standard finish of this lamp is bright brass, but any of the popular styles of finish can be furnished if so desired and ordered.

The standard lamps and economy coils are designed for 14½ amperes, but we can furnish 10 ampere lamps and coils, if required.

Recapitulation.

The Lamp Has:

A perfect chain feed.
No clutch; no rack.
A focused arc, scientifically reflected.
No shadows.
The arc itself and the lamp mechanism in separate chambers.
No steadying resistance to use up energy and therefore,
A very high efficiency.
No noise on 60 cycle current.

The Lamp Is:

The shortest lamp made.
The lightest lamp made.
Of graceful and pleasing design.
Strong.
Steady burning.
Durable.
Easy to trim.

Economy Coil.

The M. D. Economy Coil used with this lamp is also a new feature. Its purpose is to reduce the pressure supplied by 50 or 100 volt alternating current lighting circuits to the potential at which the arc lamps are operated. It is much smaller than any previous type, and it is finished in an ornamental pattern to correspond with the finish of the lamp. It is usually placed above the lamp as a ceiling rosette where it acts as the support, and

FIGURE 7.

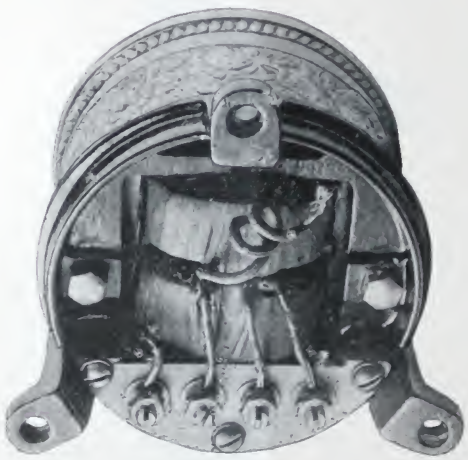
50 VOLT M. D. ECONOMY COIL.
BRIGHT BRASS FINISH.

appears as a part, of the lamp itself. A very important feature of the M. D. Coil is the multipoint winding with four steps, (see Figure 8). This permits the adjustment of the lamp voltage to correct any existing variation in drop in different localities. The coils are made for 100 or 50 volts, for 16,000 or 7,200 alternations per minute, as may be ordered. They are not interchangeable either for frequency or voltage.

Method of Operation.

Figure 9 shows the method of connecting one of these lamps and its economy coils to the main circuit. If desired, the connecting wires between the lamp and the economy coil may be carried inside a brass pipe; the hooks in the lamp and coil being taken out and the pipe screwed into their places.

FIGURE 8.



M. D. ECONOMY COIL.—CONNECTIONS.

Alternating current cored carbons should be used for both upper and lower carbons, and it is perhaps needless to call attention to the fact that the better the carbons the more satisfactory will be the light and operation of the lamp. The lamp will burn on any frequency; the same economy coil, however, cannot be used, different coils being furnished for the different frequencies.

FIGURE 9.

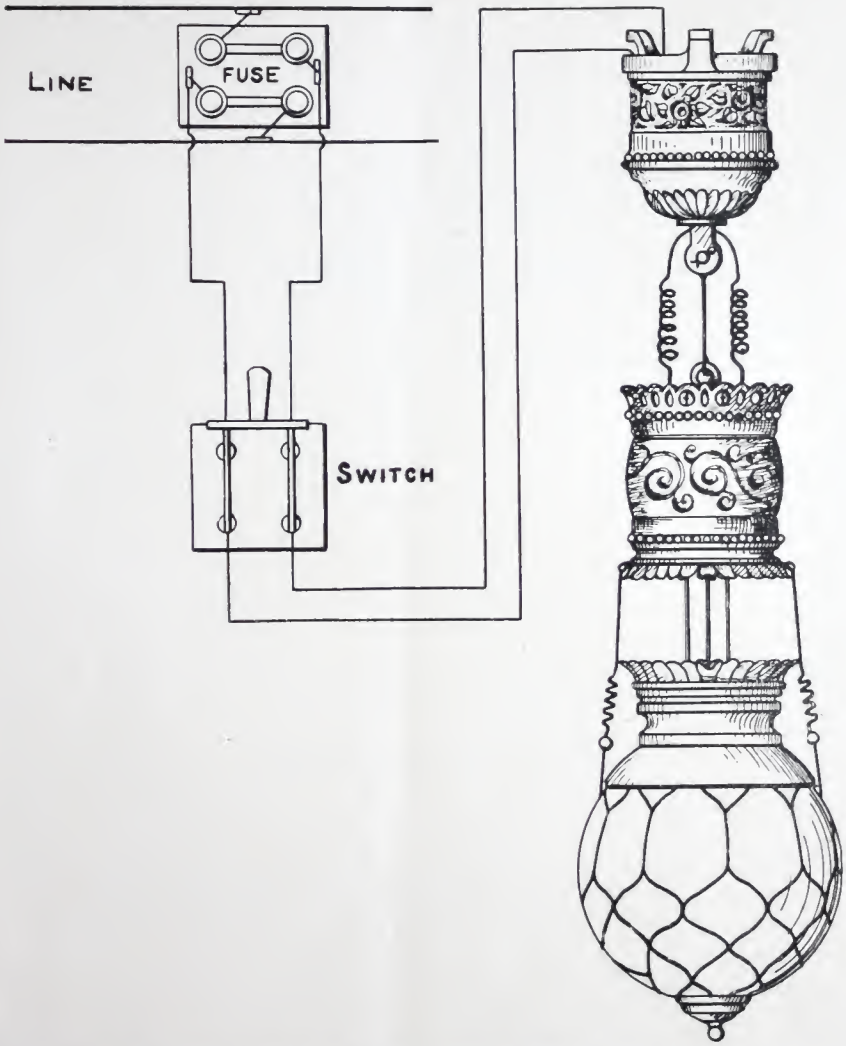


DIAGRAM OF CONNECTIONS OF LAMP AND ECONOMY COIL TO MAIN CIRCUIT.

Long Indoor Lamp.

28 VOLTS.

Alternations,	7200–16000
Terminal Voltage of Economy Coil,	50–100
Arc Voltage,	26.5
Current,	14.5
Watts in Arc,	375
Nominal Candle Power,	1600
Life, hours,	14
Weight,	14½ lbs.
Length,	2′ 6″

Carbons.

Upper, 15 mm. A. C. Cored, 9½″ long.
Lower, 15 mm. A. C. Cored, 9½″ long.

Short Indoor Lamp.

28 VOLTS.

Alternations,	7200–16000
Terminal Voltage of Economy Coil,	50–100
Arc Voltage,	26.5
Current,	14.5
Watts in Arc,	375
Nominal Candle Power,	1600
Life, hours,	10
Weight,	14 lbs.
Length,	2′

Carbons.

Upper, 15 mm. A. C. Cored, 6½″ long.
Lower, 15 mm. A. C. Cored, 6½″ long.

M. D. Economy Coils.

	Length.	Weight.
50 Volts Circuits,	9″	13 lbs.
100 Volts Circuits,	10½″	19 lbs.

WESTINGHOUSE ELECTRIC & MANUFACTURING CO.

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